

appears to leave no doubt on the subject. An immature specimen before me might be supposed to have furnished the engraver with his model; and a larger and more solid specimen, with the thickened peristome fully developed, at once stamps the form as belonging to *Cyclophorus*. The operculum has not been seen. The attention of future collectors in Ava should be particularly directed to the capture of a living example.

Cannes, 15th January 1857.

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XVII.—*Notice of a marked variety of Patella vulgata (proposed to be named var. intermedia), found in Guernsey and Jersey (from information communicated by Dr. Knapp). By ANDREW MURRAY, Edinburgh.*

THE shell in question was collected by Dr. Knapp at St. Owen's Bay in Jersey, and also near St. Samson's in Guernsey. He has never found it either in England or Scotland. He discovered it in both the above islands, along with and in the same localities as *vulgata* and *athletica*; but *athletica* was always nearer low-water mark, and very often in pools submerged, while the present shell was, like *vulgata*, almost invariably nearer high-water mark.

Various differences in the characters of the shells are also to be noted. The animal of the present shell is always black or dark-coloured, while that of *athletica* is white, with a yellow or orange tint; and here Dr. Knapp wishes me to correct a misapprehension into which the late Prof. Edward Forbes had fallen regarding some information given him on this point by Dr. Knapp, and which he has recorded in his 'British Mollusca.' In speaking of the colour of the animal of *athletica*, he states it to be always pale-coloured; but he adds, in a note, "Dr. Knapp, however, has sent us specimens of the China Limpet (*athletica*) from both Guernsey and Jersey, with the note that 'the animal is always black or dark-coloured.'" Now, this is entirely a misapprehension of Dr. Knapp's communication to Prof. Forbes, or, at all events, of what he intended to communicate. The mollusk whose animal he spoke of as being always dark, was this intermediate variety or species. It, as already mentioned, he found to be always dark; but he found *athletica* invariably pale. Prof. Forbes therefore must either have assumed that Dr. Knapp was speaking of *athletica*, or, what appears to me more probable, Dr. Knapp having sent him specimens of this shell with his remarks upon it, Prof. Forbes had determined it in his own mind to be *athletica*, and had thereupon imported the remarks upon it into his description of that species.

On comparing the two shells, however, there are other differences, besides its habitat and the colour of the animal, which seem inconsistent with the idea of its being *athletica*. Its shell never reaches the size of that species. It is rounder in shape. It wants the china-like texture in the interior, and its colour there, instead of being whitish, is yellowish cream-colour or orange-brown: the exterior also is much darker. It wants the thickness and solidity of *athletica*, or full-grown specimens of *vulgata*; and the substance of the shell itself, instead of being dirty white, is more or less tinged with yellow and brown,—although I differ from Prof. Forbes in thinking this a character worthy of much reliance. Further, although the ribs have the prominence and aspect of those of *athletica*, they are more numerous, and want the tooth-like scales arranged in successive rows, given as an essential character of the latter by Forbes and Hanley. The dark colour of the interstitial spaces also is not blotched, as in *athletica*, but uniformly continued from the base to nearly the apex, which is generally orange-yellow, although sometimes whitish. I may add, that the empirical character or general appearance of the shell (which is a kind of testimony by no means devoid of weight) speaks strongly in favour of its being distinct from *athletica*. The two shells are so different in their appearance on the rocks, that even a person wholly unacquainted with conchology could, after they had once been pointed out to him, readily and correctly say to which kind every new specimen that was seen belonged,—a test which was more than once successfully applied by Dr. Knapp.

I think therefore, on the above grounds, we may assume that it cannot be referred to *athletica*. It would appear to come nearer *vulgata*, although there are differences which almost appear specific. It certainly has more resemblance to some of the forms of young shells of *vulgata* than to any other species; but this shell, although no larger than these young shells, is full-grown. The animal of this shell is much darker than that of *vulgata*, which is usually a more or less deep slate-colour or dirty white. The shell too is almost invariably depressed, and never assumes the large, high, conical form of the full-grown *vulgata*. It has the rich brown markings of *athletica* on the exterior, and a well-defined dark-brown line running up the interstitial spaces. The ribs are particularly prominent, and it has (though in a less degree) the jagged and denticulated margin characteristic of *athletica*. The colour of the tops of the ribs both in *athletica* and the present shell is white, particularly marked when the shell is cleaned, which is not the case with *vulgata*. In the foregoing differences we see that it borrows some of its characters from *athletica*, and some from *vulgata*;

but there remains one which is very characteristic of it, and which is peculiar to itself, viz. its rich-coloured spatula, generally brownish-orange or yellowish-orange, rarely cream-coloured, reminding one of the glowing interior of some of the South Sea species. This character seems constant, and is readily recognizable: in some rare cases the colour is comparatively pale, but in the palest there is always a richness both of colour and texture, which shows as great a difference between it and the others as there is between cream and skimmed milk.

Dr. Knapp would appear not to have been the only person whom the peculiar characteristics of this shell have struck, for Forbes and Hanley mention that Mr. Alder states "that in some parts of England he had seen this Limpet (*athletica*) range much higher up between tide-marks, and had noticed on the southern coasts an intermediate form between this and *vulgata*, which looked very like a hybrid."

Whether Dr. Knapp's shell is the species which looked to Mr. Alder like a hybrid, I do not know, but think it very probable that it may be. If it is so, I do not imagine that by comparing it to a hybrid, Mr. Alder meant to propound that it *was* a hybrid, but merely that it possessed characters peculiar to both its allies; and so far he would be right. But a careful examination of a sufficient series of the different forms, &c. assumed by the species of *Patella* will not, I think, warrant us in holding it to be more than a variety. The only strongly-marked features peculiar to itself depend upon colour; and although colour, when associated with other pretty constant features, may be admitted as a character in some genera, we can scarcely admit it as such in *Patella*, where the variation of form and colour is very great, considering the restricted scope the simplicity of its outline affords. If it is not a distinct species, then the proper species to which to refer it as a variety is undoubtedly *vulgata*. A very marked and easily recognizable variety it certainly is; but, as Dr. Greville has suggested to me, there are other varieties not much less marked; for instance, the high, conical, peaked form, characteristic of the species found at Inverary, and still more so the deep leaden-coloured variety, which invariably exhibits a margin almost black. These to my mind are not so striking as the present, and, moreover, are varieties which are not confined, as I believe this to be, to Guernsey and Jersey, and possibly the south of England. Still the existence of so great variations renders the possibility of others still greater not unlikely, and I therefore have, on the whole, come to be of opinion that the shell in question is merely a variety of the *Patella vulgata*, which, for convenience of future reference, Dr. Knapp proposes to call *Patella vulgata* var. *intermedia*.